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The
Condensed Chemical
Dictionary

TENTH EDITION

Revised by

GESSNER G. HAWLEY



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temperatures, excellent electrical properties and can be easily colored.

Uses: Tires, automotive parts, tank cars, hoses, and insulation.

Royal jelly. A complex mixture secreted by "worker" honeybees, which comprises the sole nutrient of the queen bee. It contains 31% protein, 15% carbohydrate, 15% lipid, plus vitamins. The free fatty acid portion of the lipid is a mixture of C_{10} acids.

"Royal Methyl Violet."¹⁴¹ Trademark for violet pigment produced by precipitation of the basic methyl violet dyestuff with phosphomolybdic acid. Use: Printing inks.

"Royal Spectra."¹³³ Trademark for an impingement carbon black. Used in specialty application requiring highest blackness and reinforcing power.

"Royal Victoria Blue."¹⁴¹ Trademark for blue pigment produced by precipitation of basic Victoria Blue dye with phosphomolybdic acid. Used in printing inks and some paints.

"RPA."²⁸ Trademark for a group of peptizing agents for natural and synthetic rubber.
No. 2. 2-Naphthalenethiol, $C_{10}H_7SH$, with inert wax.
No. 3. 36% or 71% xylene thiols, $(CH_3)_2C_6H_3SH$, in an inert hydrocarbon.
No. 6. Pentachlorothiophenol, C_6Cl_5SH .

"RR-10."²⁸ Trademark for a group of mixed dixylyl disulfides, $[(CH_3)_2C_6H_3]_2S_2$. Used to accelerate devulcanization of natural rubber, SBR, and mixed scrap for reclaiming purposes.

RR acid (2-amino-8-naphthol-3,6-disulfonic acid; 2R acid), $C_{10}H_4NH_2OH(SO_3H)_2$.
Derivation: Fusion of a naphthylamine trisulfonic acid with sodium hydroxide.
Use: Azo dye intermediate.

"RSR."¹⁷³ Trademark for a proteolytic enzyme preparation for removal of stains; available in powder form specifically designed for removing albuminous spots and stains from garments.

"RTV."²⁴⁵ Trademark for a family of silicone rubber compounds. RTV (room temperature-vulcanizing) rubbers have good physical properties and electrical properties similar to silicone rubber.

Uses: Sealing, caulking, encapsulating and flexible mold-making in electronic, aircraft, missile, and building industries.

See also silicone (uses).

Ru Symbol for ruthenium.

"Rubanox Red."¹⁴¹ Trademark for lithol rubine pigments of bright bluish-red shades. Composed of calcium salts of azo pigments formed when 4-aminotoluene-3-sulfonic acid is coupled with beta-hydroxynaphthoic acid.

Uses: Printing inks, paints, enamels, lacquers, rubber, plastics, wallpaper, floor coverings.

rubber. Any of a number of natural or synthetic high polymers having unique properties of deformation (elongation or yield under stress) and elastic recovery after vulcanization (q.v.) with sulfur or other cross-linking agent, which in effect changes the polymer from thermoplastic to thermosetting. The yield or stretch of the vulcanized material ranges from a few hundred to over 1000 per cent. The deformation after break, called "permanent set," is usually taken as the index of recovery; it ranges from 5 to 10% for natural rubber to 50% or more for some synthetic elastomers, and varies considerably with the state of vulcanization and the pigment loading. See also elastomer and following entries.

rubber cement. See adhesive, rubber-based.

rubber, chlorinated. An elastomer (natural rubber or a polyolefin) to which 65% of chlorine has been added to give a solid, film-forming resin. White, amorphous powder available in viscosity grades from 5 to 125 centipoises, the figures indicating viscosity of a 20% solution in toluene. Decomposes at 125°C. Soluble in aromatics; insoluble in aliphatics and alcohols. Compatible with almost all natural and synthetic resins. Chief use is in maintenance paints (marine, swimming pool, traffic, masonry, etc.). See also "Parlon," "Hypalon," rubber hydrochloride.

Hazard: Do not dry-mill chlorinated rubber with zinc oxide; mixture reacts violently at 216°C. Do not use in baked enamels.

rubber, cold. See cold rubber.

rubber fiber. Generic name for a manufactured fiber in which the fiber-forming substance is comprised of natural or synthetic rubber (Federal Trade Commission). Often the rubber is a core around which cotton or other fibers are wrapped to make an elastic yarn used for girdles, swimwear, elastic bands and tapes.

rubber, hard. A rubber compounded with from 30 to 50% by weight of sulfur and cured until an extremely hard, brittle product is formed. Lime or magnesia is used as activator. The theoretical maximum of sulfur that can combine chemically with rubber hydrocarbon is 32%. Combustible; non-toxic.

Hazard: Flammable in form of dust.

Uses: Battery boxes; tank linings; acid- and alkali-resistant equipment; combs. As dust, filler for low-cost rubber products.

rubber hydrochloride. A hydrochloride derivative, as distinct from a chlorine derivative.

Properties: Thermoplastic white powder or clear film. Odorless, tasteless, nonflammable, nontoxic. Chlorine content 29-30.5%. Soluble in aromatic hydrocarbons. Softens at 110-120°C. Films are highly resistant to moisture, oils, acids and alkalis but tend to become brittle on exposure to sunlight. The life of such films is greatly extended by the